Photoelectrics
Retro-reflective, Polarized
Type PMP

CARLO GAVAZZI

- **Range: 6 m**
- **Modulated, visible light, polarized**
- **Make or break switching function (switch selectable)**
- **LED-indication for target detected**
- **Multi supply voltage:**
  12 to 240 VDC and
  24 to 240 VAC, 50/60 Hz
- **25 x 65 x 81 mm reinforced PC/ABS- housing, IP 67**
- **Timer options (adjustable)**
- **NO and NC output**

Product Description

Retro-reflective photoelectric switch with polarized light. Range up to 6 m. Fixed sensitivity. Immune to ambient light. Output function switch selectable. Protection degree IP 67. Screw terminal connection.

25 x 65 x 81 mm plastic housing. PG 13.5 or 1/2" NPT cable gland. Timer options: Delay on operate, delay on release, one shot (triggered on leading or trailing edge).

Ordering Key

PMP6R G T

Type

PG 13.5 cable gland

Option: Timer function

Type Selection

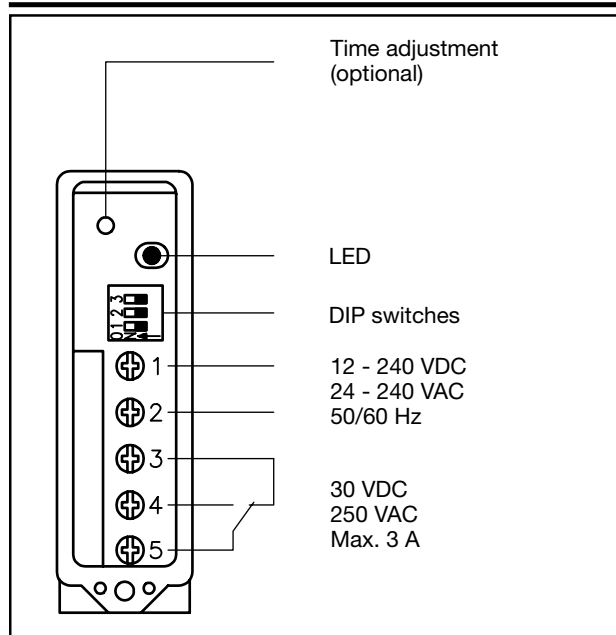| Housing W x H x D	Range (S$_n$)	Ordering no. without timer	Ordering no. with timer
25 x 65 x 81			
PG 13.5 cable gland	6 m	PMP 6R G	PMP 6R GT
1/2" NPT cable gland	6 m	PMP 6R I	PMP 6R IT

Specifications

Rated operating dist. (S$_n$) (0 to 5,000 lux)	PMP6.. 6 m with reflector type ER 4, ref. target	**Operating frequency**	20 Hz
Blind zone	≤ 0.15 m	**Response time** OFF-ON (t$_{ON}$) ON-OFF (t$_{OFF}$)	≤ 20 ms ≤ 30 ms
Rated operational volt. (U$_B$) AC: 45 to 65 Hz	10.8 to 264 VDC 21.6 to 264 VAC	**Power ON delay (t$_v$)**	≤ 300 ms (typ. 100 ms)
Rated operational power (relay ON)	≤ 2 W (2.5 VA)	**Output function**	Switch selectable, make or break switching
Output		**Indication**	
Contact ratings (AgCdO)	µ (micro gap)	Target detected	LED, yellow
Resistive loads AC 1	3 A/250 VAC	**Optional timer**	
DC 1	3 A/30 VDC	Delay on operate	0.1 to 7 s ± 2 s
Small inductive loads AC 15	2 A/250 VAC	Delay on release	0.1 to 7 s ± 2 s
DC 13	3 A/30 VDC	One shot	0.1 to 7 s ± 2 s
Mechanical life (typical)	≥ 40 x 10^6 operations	**Environment**	
Electrical life (typical)	≥ 5 x 10^5 operations at 220 VAC - 3 A resistive load: 360 impulses/h	Overvoltage category Pollution degree Degree of protection	III (IEC 664/664A; 947-1) 3 (IEC 664/664A; 947-1) IP 67 (IEC 529; 947-1)
Dielectric voltage	2,000 VAC (rms) (cont./supply)	**Temperature** Operating Storage	-25 to +55°C (-13 to +131°F) -30 to +80°C (-22 to +176°F)
Sensitivity	Fixed		
Light source **Light type** **Optical angle** **Light spot size**	GaAlAs, LED, 660 nm Visible, modulated ±2° 280 mm at 4 m		

Specifications are subject to change without notice

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Specifications (cont.)

Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 68-2-6)
Shock	2 x 1 m & 100 x 0.5 m (IEC 68-2-32)
Rated insulation voltage	250 VAC (rms)
Housing material	
Body	PC/ABS, grey
Front	PA, red
Cover	PC, black
Cable gland	PA, black, reinforced
Mounting bracket	Steel, black
Connection	
Screw terminal	5 x 2 x 1 mm^2
Cable gland	PG 13.5 or 1/2" NPT for cable 6 to 10 mm
Weight	110 g

Connection Diagram

Time adjustment (optional)

LED

DIP switches

1 — 12 - 240 VDC
2 — 24 - 240 VAC 50/60 Hz

3
4 — 30 VDC
5 — 250 VAC Max. 3 A

Accessories

• Reflectors: ER series
• MB02 (longer mounting bracket)

For further information refer to "Accessories".

Selection of Function

Switch
1 2 3

PMP 6R .

  1 Break switching

  2 Make switching

PMP 6R .T

  3 Delay on operate - Break switching

  4 Delay on operate - Make switching

  5 Delay on release - Break switching

  6 Delay on release - Make switching

  7 One shot, trailing edge - Break switching

  8 One shot, trailing edge - Make switching

  9 One shot, leading edge - Break switching

  10 One shot, leading edge - Make switching

⊠ Don't care

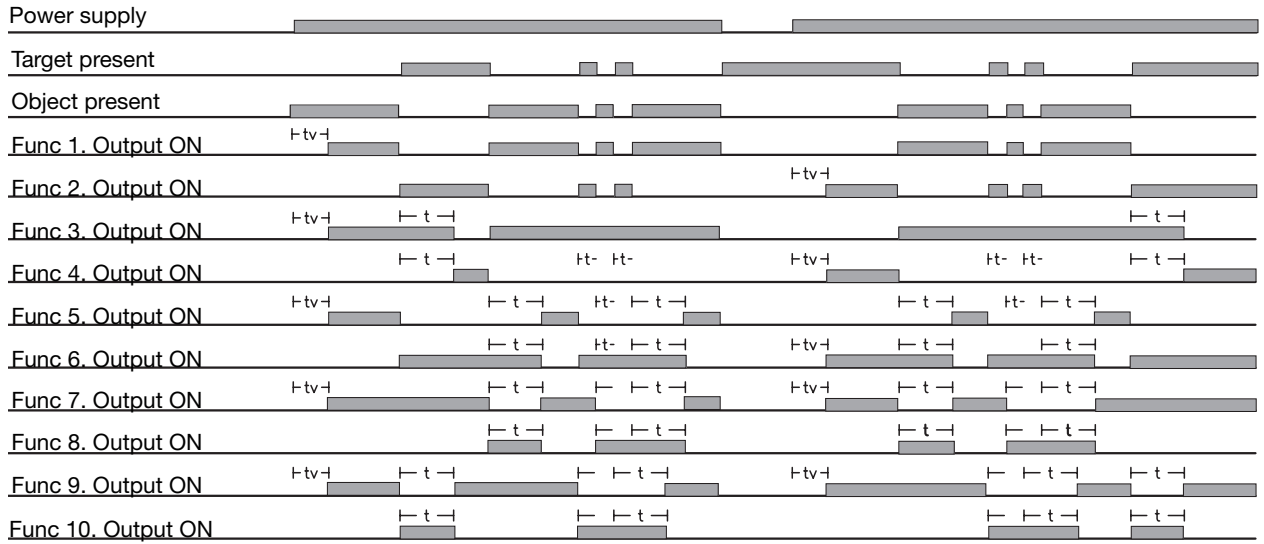Upper postion ON (Mode 1)
Lower position OFF (Mode 0)

Truth Table

	Make switching		Break switching	
Object present	Yes	No	Yes	No
LED	OFF	ON	OFF	ON
Load	Non-active	Active	Active	Non-active

Delivery Contents

• Photoelectric switch: PMP
• Cable gland
• Installation instruction
• Mounting bracket
• **Packaging:** Corrugated cardboard (environmentally friendly recycling material)

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Operation Diagram

t = Time delay
tv = Power ON delay

Power supply

Target present

Object present

Func 1. Output ON

Func 2. Output ON

Func 3. Output ON

Func 4. Output ON

Func 5. Output ON

Func 6. Output ON

Func 7. Output ON

Func 8. Output ON

Func 9. Output ON

Func 10. Output ON

Dimensions

PMP

PMP with angle bracket

Specifications are subject to change without notice

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